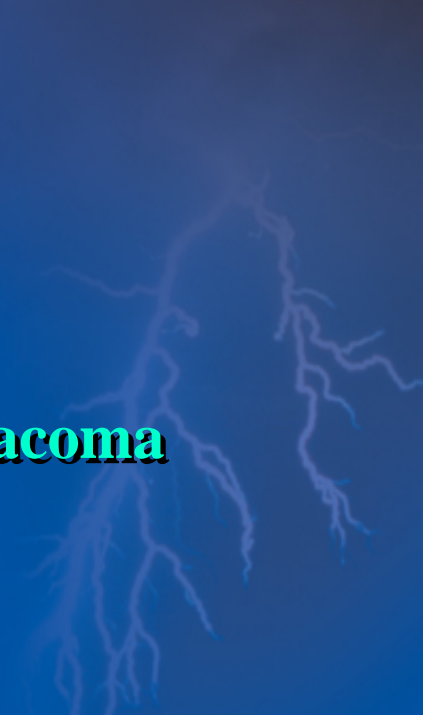


Dangerous Winter Storm to hit Western Washington this weekend!

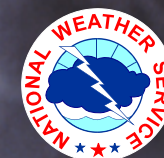
19 December 2008

National Weather Service – Seattle/Tacoma

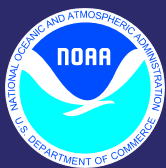




Overview



- **An intense Pacific storm is taking aim on Western Washington.**
- **What we can say now:**
 - ***This will be a major winter storm that will be life threatening and disruptive to transportation and power for significant parts of Western Washington.***
 - ***The most severe threats include:***
 - **Blizzard conditions in the mountain passes and the area of the west Strait**
 - **High Wind in the East Puget Sound Lowlands**
 - **Snow, sleet, and freezing rain across much of the lowlands:**
 - ***Heaviest snow - the Olympics, west Strait, Southwest Interior and Hood Canal area***
 - ***Greatest risk of sleet and freezing rain - Tacoma southward through Olympia to the coast***
 - ***Least amount of snow – east Puget Sound areas especially closer to the Cascades, the north Olympic Peninsula and the Northwest Interior***
 - ***Terrain will continue to play a major role in where, how much, and when.***

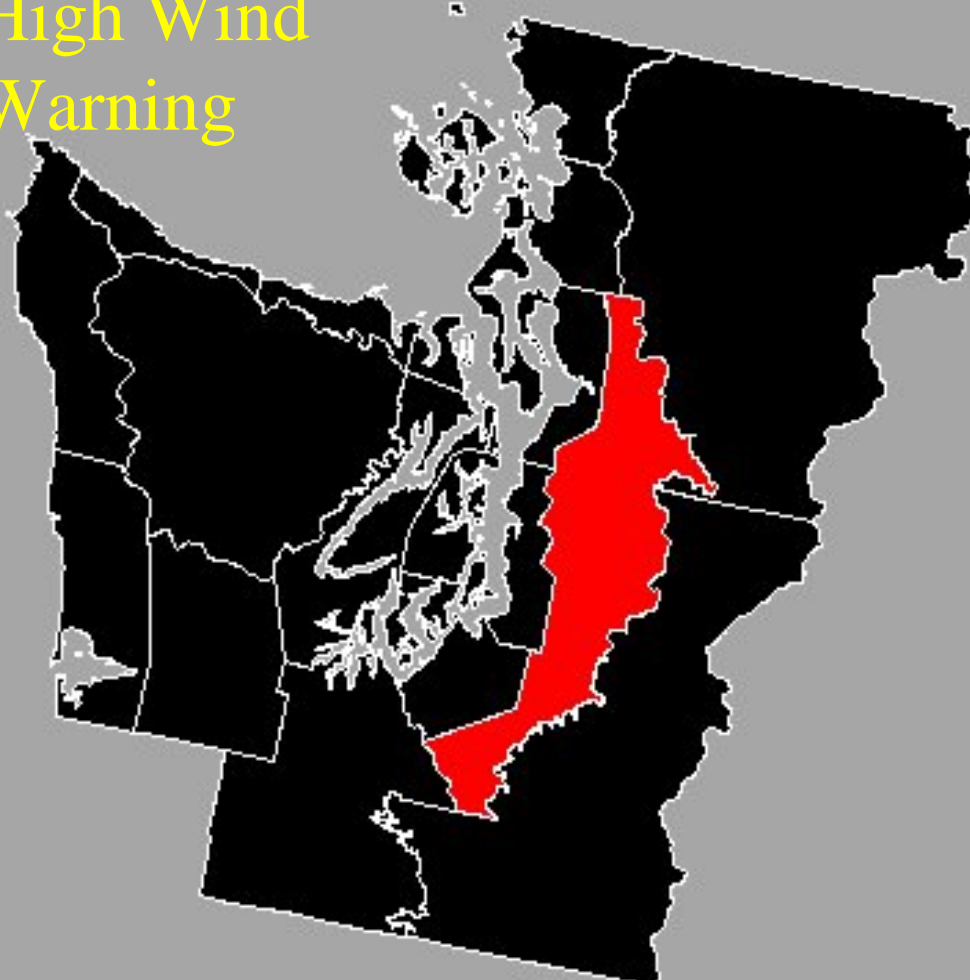


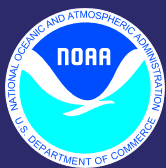
Afternoon Update



■ Zones Not Included

High Wind
Warning



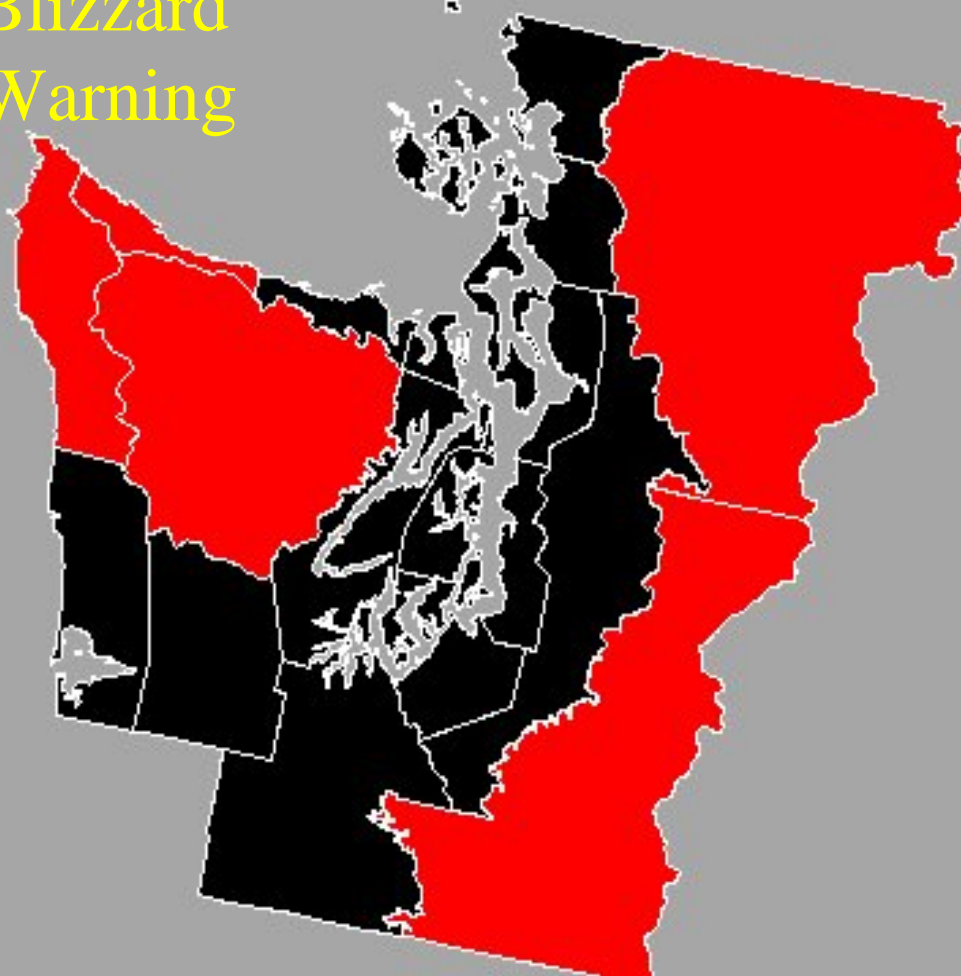


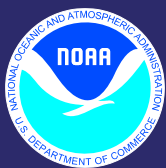
Afternoon Update



■ Zones Not Included

Blizzard
Warning



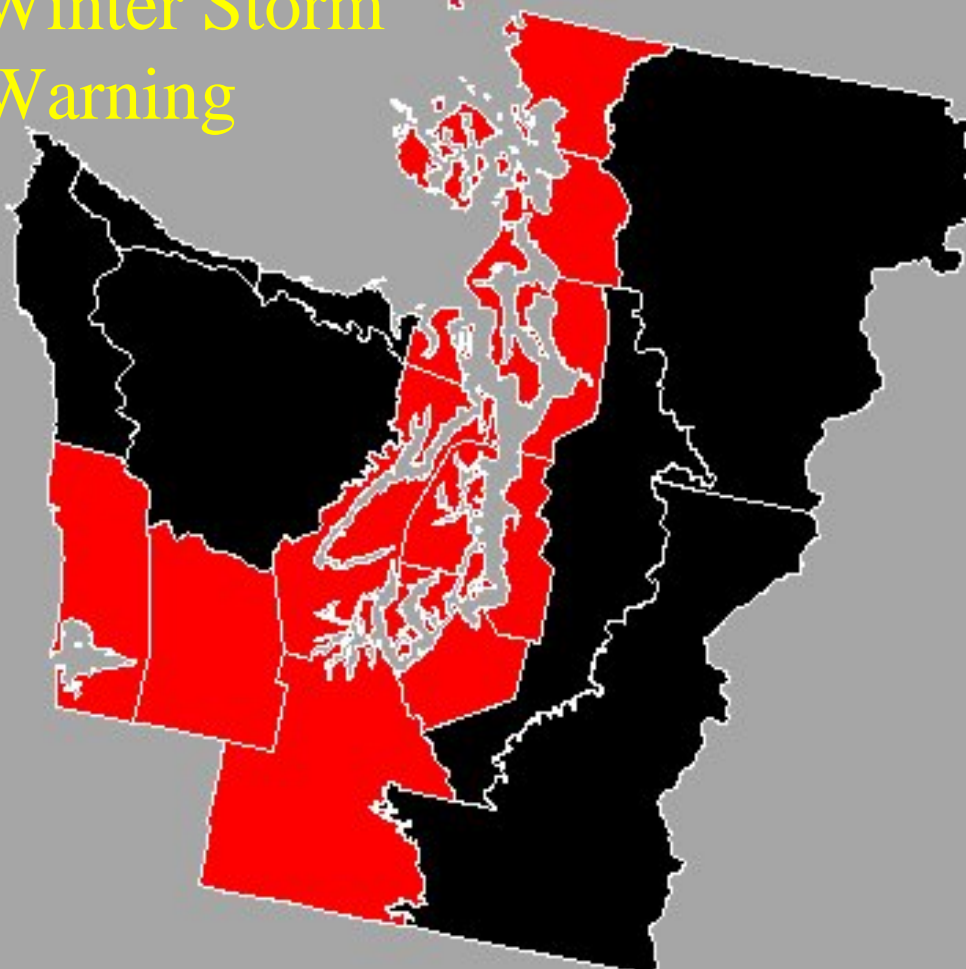


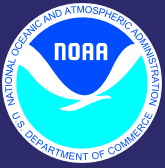
Afternoon Update



■ Zones Not Included

Winter Storm
Warning

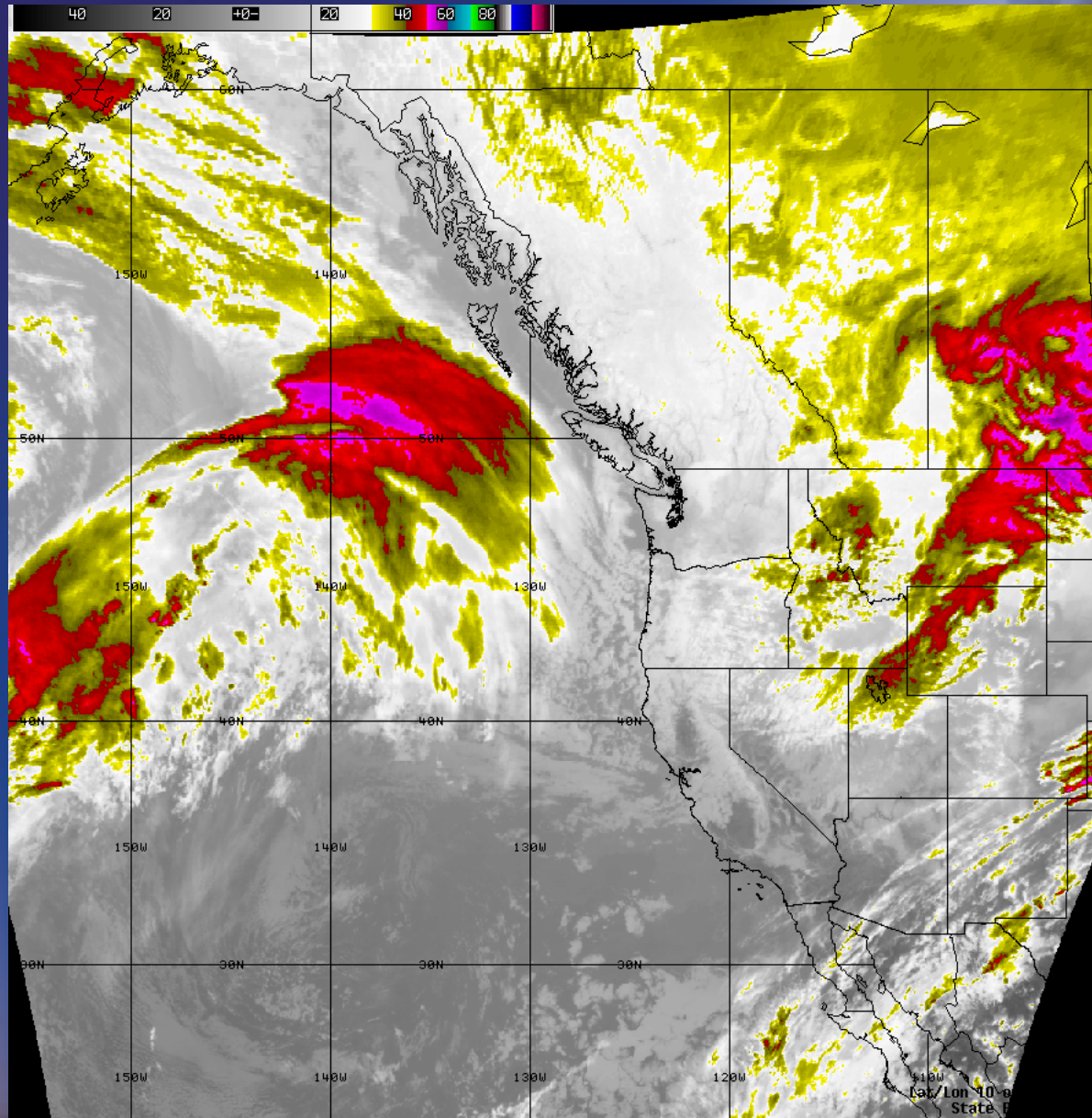
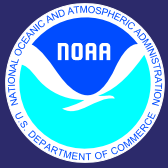




What is a Blizzard?

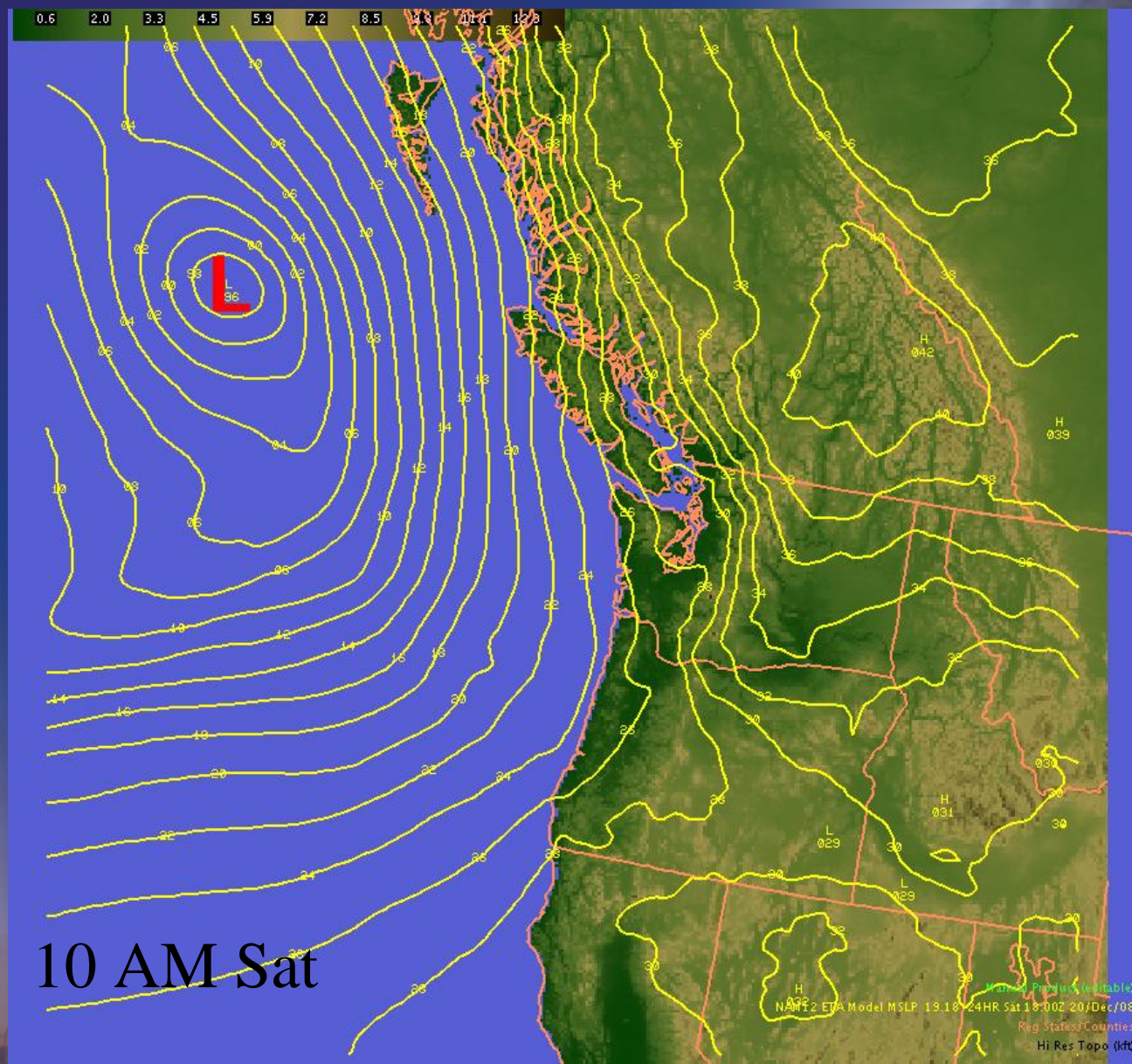
- The National Weather Service defines a blizzard as a storm that contains:
 - *large amounts of snow OR blowing snow*
 - *winds in excess of 35 mph*
 - *visibilities of less than 1/4 mile for an extended period of time (at least 3 hours).*

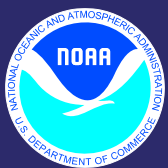
Satellite Image



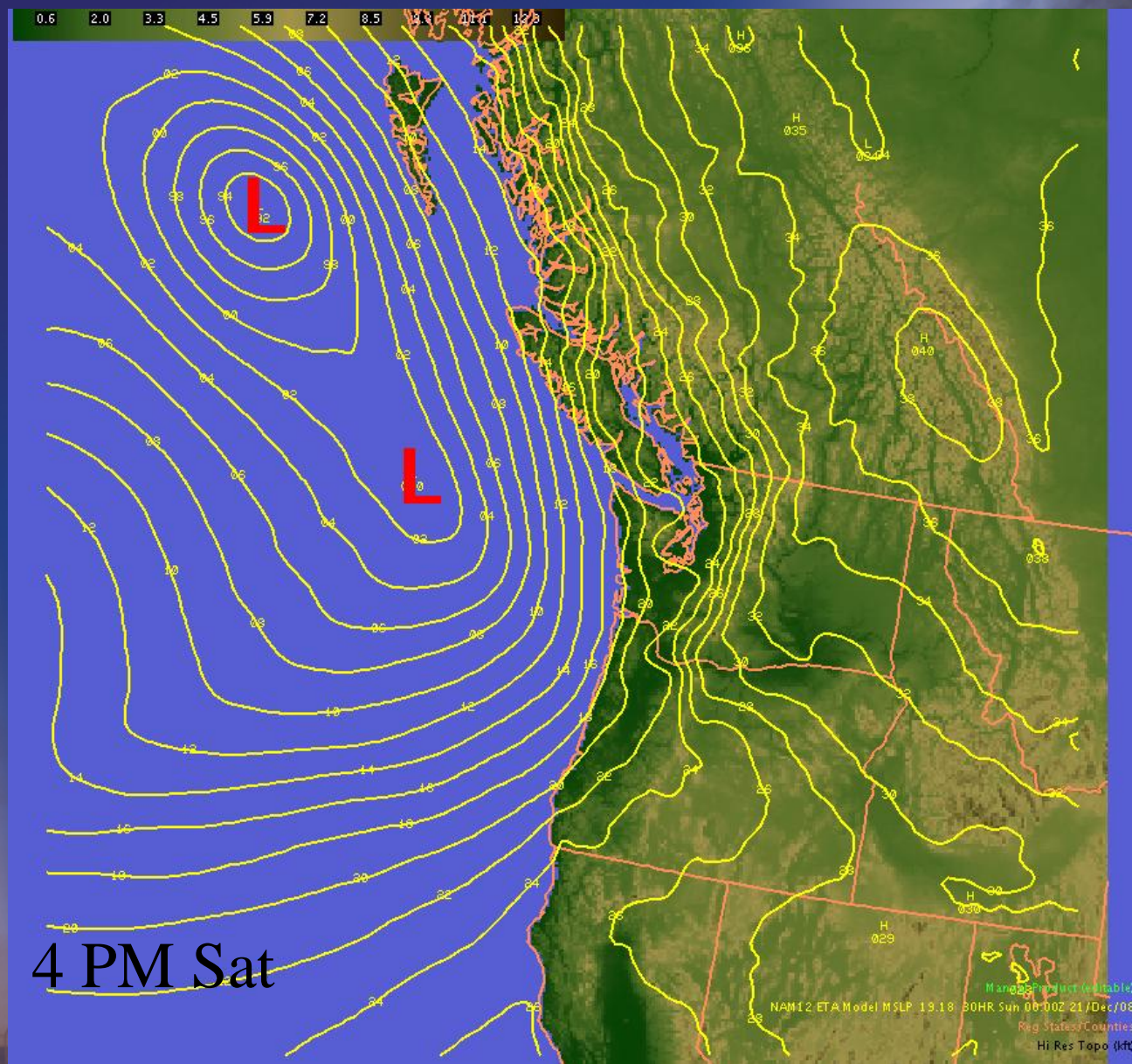


10 AM Sat



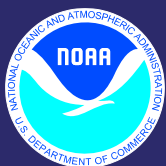


Low Track/Gradients

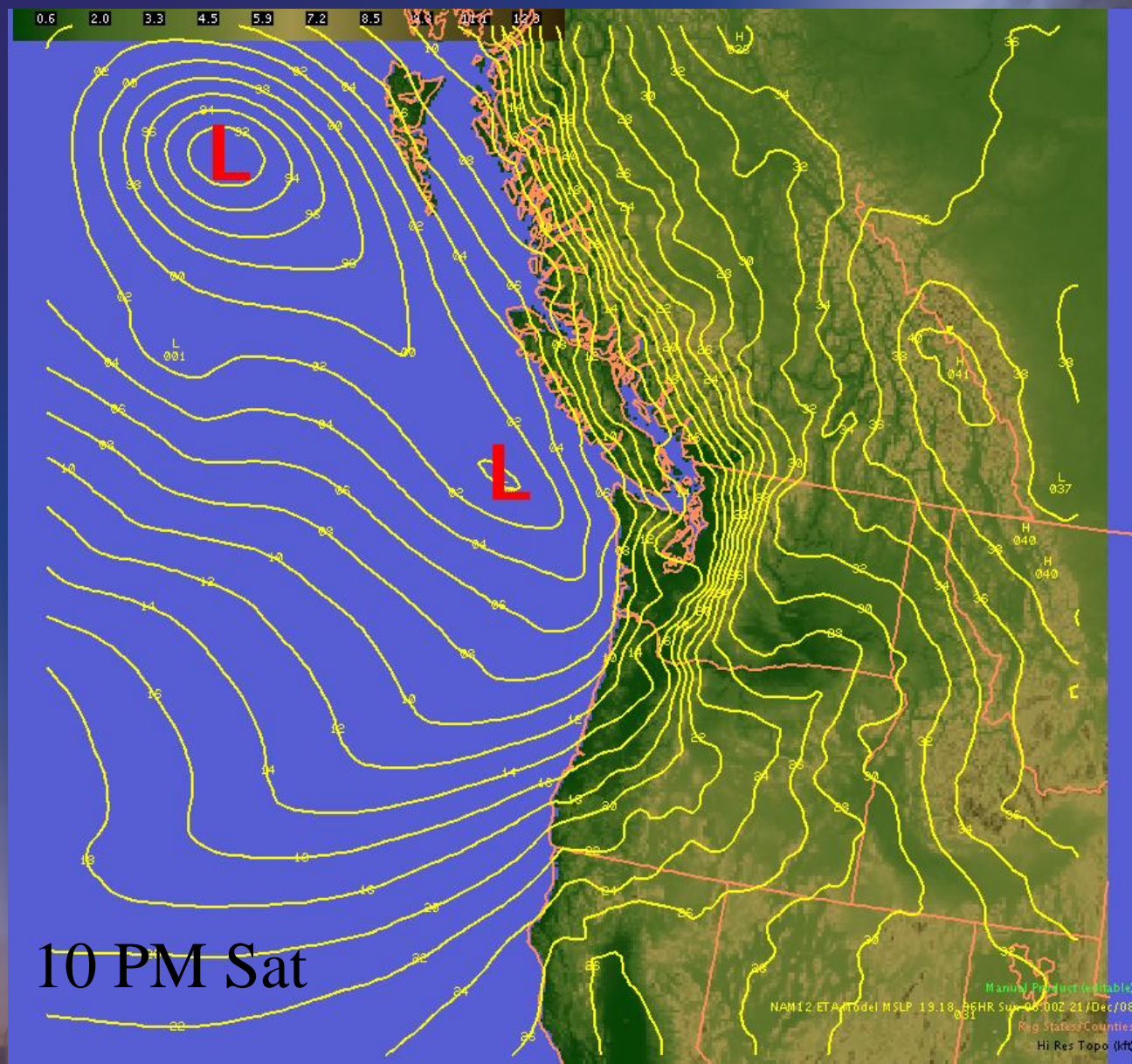


4 PM Sat

MandB Product (Editable)
NAM12 ETA Model MSLP 19.18 50HR Sun 00-00Z 21/Dec/08
Reg States/Counties
Hi Res Topo (kto)

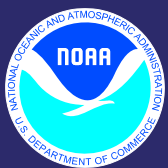


Low Track/Gradients

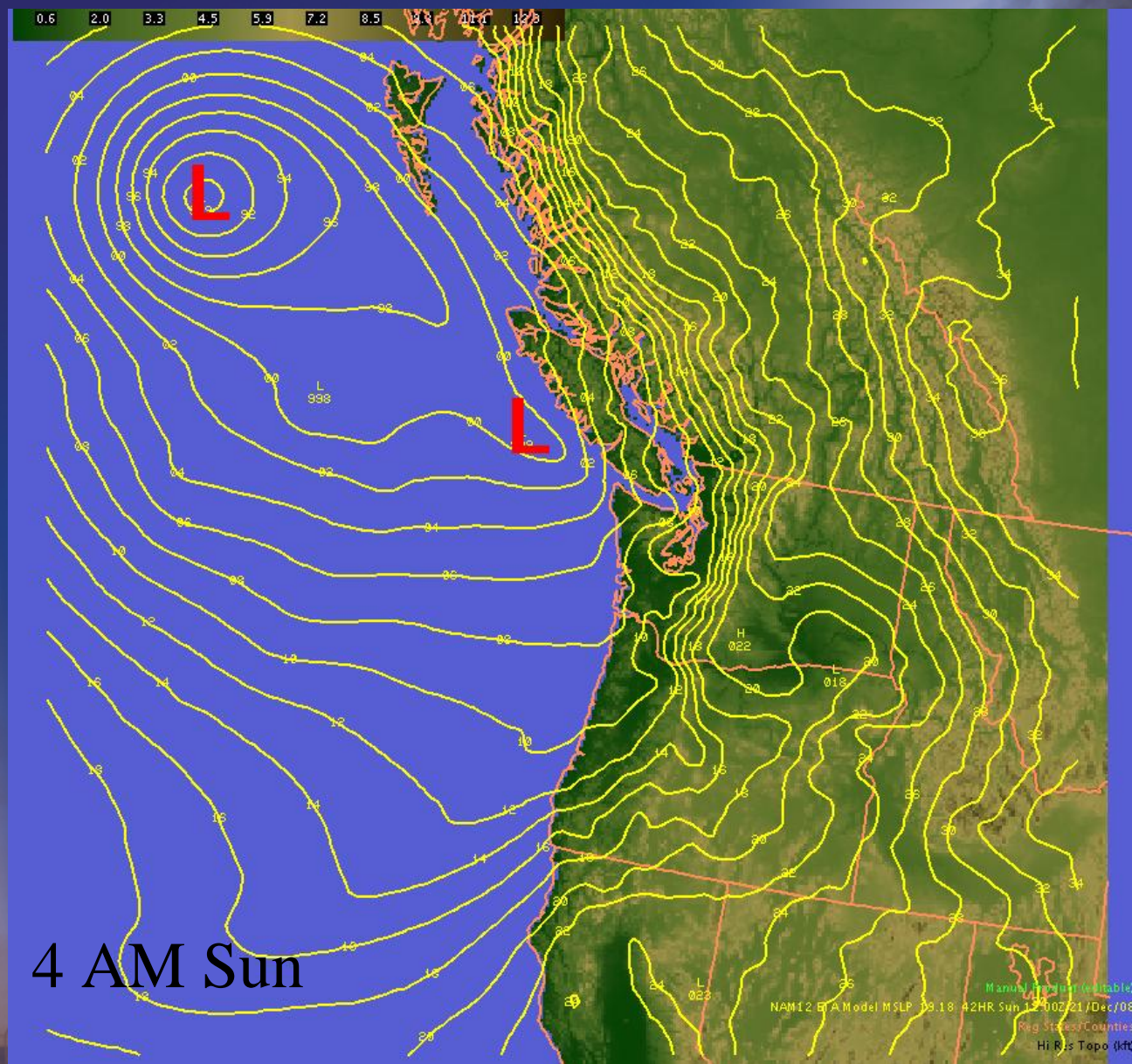


10 PM Sat

Manus/ Product (editable)
NAM12 ETA Model MSLP 19.18 05HR Sun 08-00Z 21/Dec/08
Reg States/Countries
Hi Res Topo (kt)

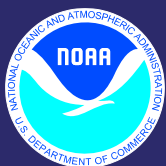


Low Track/Gradients

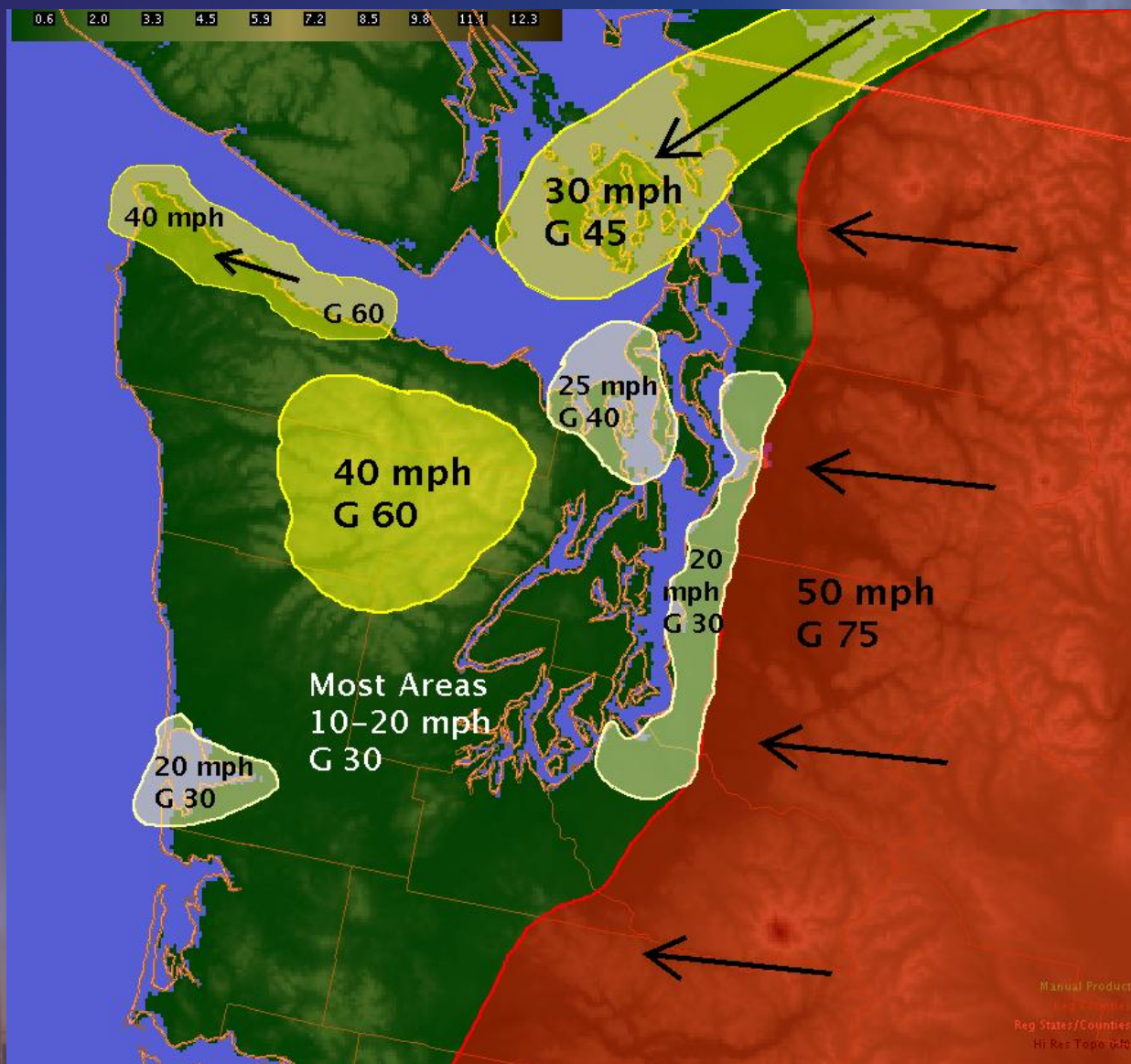


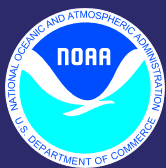
4 AM Sun

Manual Gradient (kPa)
NAM12 Eta Model MSLP 09.18 42HR Sun 12/002/21/Dec/08
Reg States/Counties
Hi R: Topo (kft)

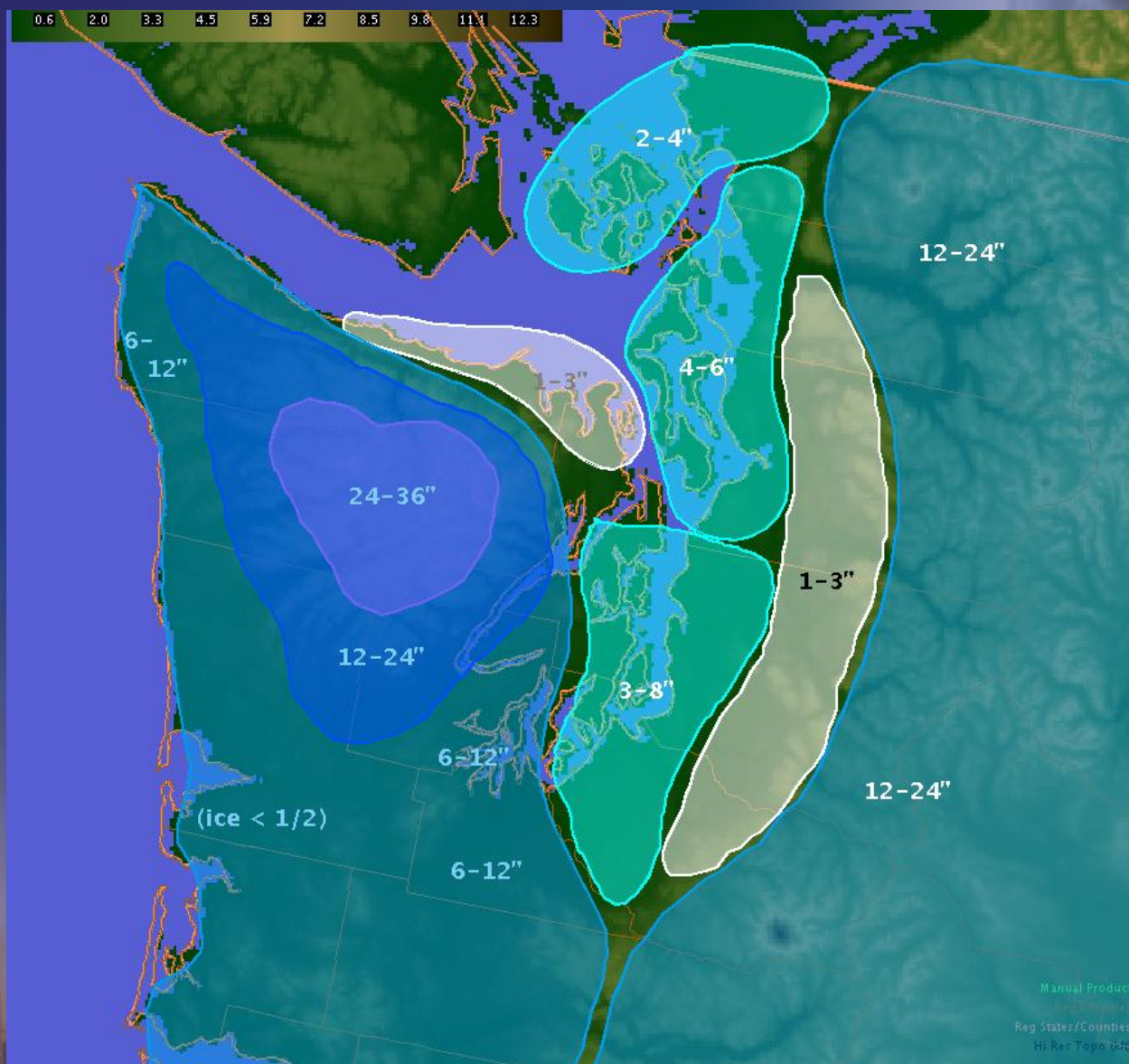


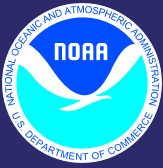
Wind





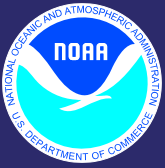
Snow/Ice





Timing and Impacts

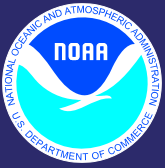
- **Saturday**
 - ***Very strong winds near the Cascades***
 - Winds could reach Warning criteria by early afternoon (sustained 40 mph; gusts greater than 58 mph)
 - By late afternoon or evening there is the threat of sustained winds 50 to 60 mph with gusts to 75 mph or greater
 - ***Structural damage, road closures, downed trees, and power lines.***
 - ***Snow moving in from the southwest***
 - Central coast and Olympics early afternoon; Cascades late afternoon
 - North coast and central Puget Sound late afternoon or early evening; North Interior during the evening
 - ***Most roads will become snow covered by evening***
 - ***Highs – generally in the twenties***



Timing and Impacts

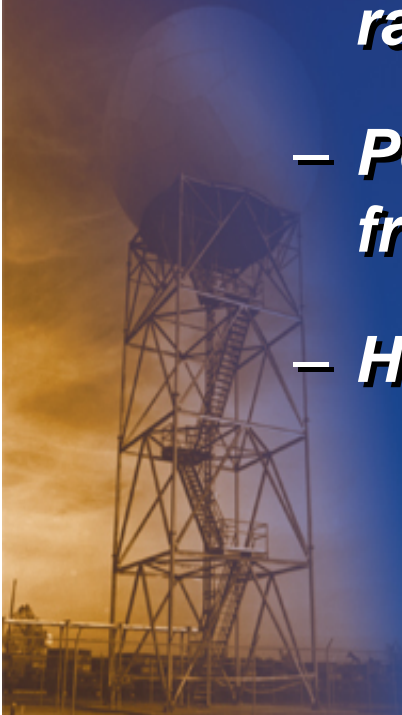
- **Saturday night**

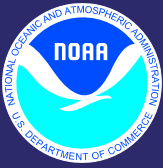
- ***Blizzard conditions in the west Strait area and Cascade Passes (winds exceeding 35 mph; visibilities < ¼ mi)***
- ***Very strong winds near the Cascades***
 - Ongoing threat of sustained winds 50 to 60 mph with gusts to 75 mph or greater
- ***Widespread Snow***
 - Heaviest in the Olympics, west Strait, Southwest Interior and Hood Canal (could exceed 2 inches an hour)
 - Least in the north Cascades, North Interior, East Puget Sound Lowlands
- ***Sleet and Freezing Rain***
 - Greatest threat southwest interior and coast, spreading northeast to about Tacoma
- ***Temperatures – gradually moderating into the lower 30s***



Timing and Impacts

- **Sunday**
 - *Strong winds ending by noon*
 - *Gradually decreasing precipitation as a mix of rain and snow*
 - *Potential for some ponding of water due to frozen and blocked drains*
 - *High temperatures lower 30s to lower 40s.*





Impacts Summary

- **The Week Ahead**

- *Looks to be continued unseasonably cool, but not as cold as it has been*
- *Forecast guidance is highly variable ???*
 - (a) moderation with generally rain lowlands and mountain snows, or
 - (b) ongoing threat of some lowland snow or rain/snow mix
- *No immediate threat of a major warm-up, heavy rain, and rapid melt of accumulated lowland snow*
- *Stay Tuned !!*

Avalanches Last December in the NW mountains—

SHALLOW WEAK SNOWPACK

- Last December—6 avalanche fatalities (WA)
- Last winter—9 avalanche fatalities in Washington
- Last winter—36 avalanche fatalities in the US—
a record

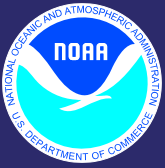


This December— Saturday PM & Sunday

- **SHALLOW & VERY WEAK SNOWPACK**
- **Cold, heavy snow, high winds developing later Saturday through Sunday**
- **⇒ Strong over weak snow—BAD COMBO**
- **SUBSTANTIAL INCREASE IN THE AVALANCHE DANGER**

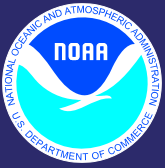
In Summary this weekend

- COLD with increasing SNOW
- VERY WINDY (esp. Cascade passes and west approaches—wind chills well below zero °F)
- Blowing and drifting snow—poor visibility
- Wind slabs load fragile snowpack
- Strong local variability in danger (scoured windward slopes to wind loaded lee slopes)
- Fragile snowpack layers persist until warm up and rain



Resources

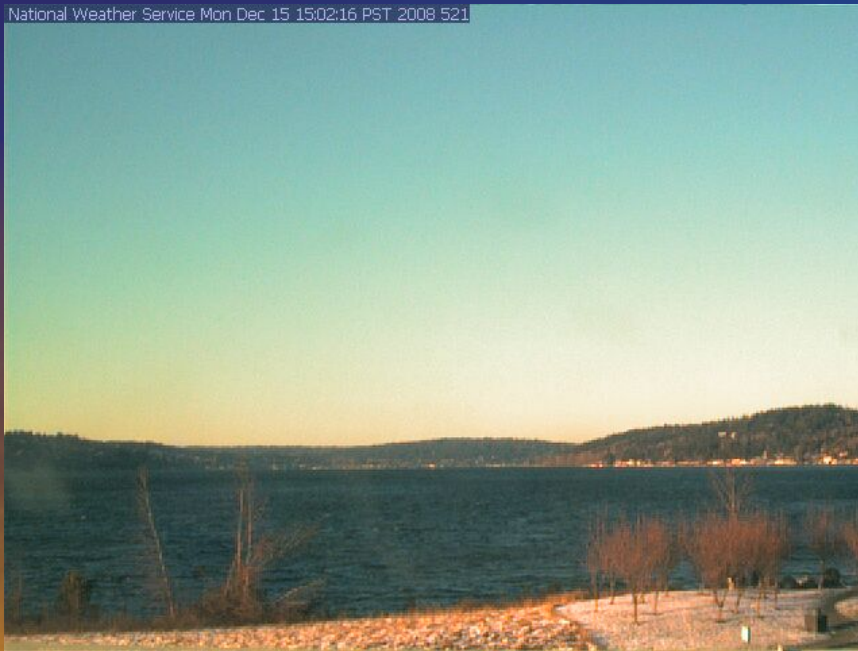
- weather.gov/seattle/ – NWS Seattle web site
 - Area Forecast Discussions (Text and new Graphical)
 - Doppler weather radar and satellite imagery loops
 - Latest forecasts and warning statements
- nwac.us – Northwest Weather and Avalanche Center
- wsdot.wa.gov – Washington State Dept. of Transportation



Questions?



National Weather Service Mon Dec 15 15:02:16 PST 2008 521



- **Thank you for attending**
- **Will post this slide set on our web page shortly after we are done**
- **Next webinar?**

View Tue out NWS Seattle windows facing north from webcam on web page